IN THE SPECIFICATION

On page 1 directly before line 5 of the English specification, insert the following new paragraphs:

Cross-Reference to Related Applications

This is a 371 of PCT/EP2003/009229, filed 20 August 2003 which claims priority from German Patent Application No. 102 38 046.5 filed 20 August 2002.

Technical Field

Please replace the paragraph at page 1, lines 17-24 of the English specification with a new paragraph as follows:

Background of the Invention

Aerobic organisms in particular are exposed to oxidative stress throughout life. Both endogenous and exogenous factors lead to continuous production of free radicals, especially in the form of reactive oxygen species. Without an appropriate antioxidative protection, the damage, associated with the reaction of the free radicals, to cellular constituents and cellular structures would soon result in death of the cell.

Please replace the paragraphs at page 3, lines 14-28 of the English specification with new paragraphs as follows:

It has been possible in recent years, through the identification and characterization of disseminated cancer cells, to achieve astonishing advances in the diagnosis, prognosis and therapy of cancers. This approach is based on the realization that the disseminated cancer cells are a tumor entity independent of the primary tumor therefore are fundamentally different from cells of the primary tumor on the basis of a different genotype and phenotype. Thus, for example, it is possible with the aid of multiparameter analyses to answer, irrespective of the status of the primary tumor, questions with prognostic and therapeutic relevance in a number of patients with breast cancer (Giesing M. et al., The International Journal of Biological Markers vol. 15 (1), 94-99, ~~1999~~ 2000.

Summary of the Invention

On page 4, between lines 5 and 7 of the English specification, insert the following new paragraphs:

The present invention also relates to analysis kits for carrying out the method of the invention.

Brief Description of the Drawing

Fig. 1 shows a CCD contact exposure images generated in a detection measurement of the invention and shows results of Example 3.

Detailed Description

Please replace the paragraph at page 31, lines 13-28 of the English Specification with a new paragraph as follows:

A further aspect of the present invention is therefore the use of the method of the invention for identifying cancer cells, in particular in early diagnosis of tumors. This is connected in particular with the analytical finding of whether the investigated sample has cancer cells, or the diagnostic finding of whether the individual whose sample has been investigated is suffering from cancer. An elevated expression of at least one MNSOD gene in combination with an elevated expression of at least one TXNRD gene and/or at least one ~~TGTPX~~ GPX gene, and in particular an elevated expression of at least one MNSOD gene in combination with an elevated expression of at least one TXNRD gene in combination with an elevated expression of at least one ~~GTPX~~ GPX gene is to be regarded as an indication of the presence of cancer cells in the investigated samples.

Please replace the paragraph at page 31, line 37 - page 32, line 3 of the English specification with a new paragraph as follows:

One aspect of the present invention is also the use of the method of the invention for characterizing cancer cells, e.g. for classifying tumors and for estimating the risk for the patient. This is connected with prognostic findings about the future course of a cancer, such as the probability (risk) of developing a metastasis or a recurrence, or of surviving a particular time, and therapeutic findings about the efficacy of an applied therapy (therapy monitoring) or findings for choice of the therapy. An elevated expression of at least one MNSOD gene in combination with an elevated expression of at least one TXNRD gene

and/or of at least one ~~TGTPX~~ GPX gene, and in particular an elevated expression of at least one MNSOD gene in combination with an elevated expression of at least one TXNRD gene in combination with an elevated expression of at least one ~~GTPX~~ GPX gene is associated with an increased risk of developing a metastasis or a recurrence, and with a reduced probability of surviving a particular time. In order to assess the efficacy of an applied therapy (therapy monitoring), the method of the invention is carried out on at least two different dates, i.e. before and after a particular therapeutic procedure. It is possible to determine by comparing the expression determined before and after the procedure whether the therapeutic procedure has led to a change in the number of cancer cells identifiable by the method of the invention in the sample. A decrease is an indication of the efficacy of the therapeutic procedure. It is possible in this way to assess in particular those therapeutic procedures intended to reduce or eliminate disseminated cancer cells.

Please replace the paragraph at page 34, lines 25-30 of the English specification with a new paragraph as follows:

These and further parameters are described and explained in WO 99/10528, WO 00/06702 and in Giesing M. et al., The International Journal of Biological Markers Vol.

15(1), 94–99, ~~1999~~ 2000. These statements are incorporated in this description in their entirety by reference.

Please replace the paragraph at page 34, lines 32-34 of the English translation with a new paragraph as follows:

As indicated above, the ~~The~~ present invention also relates to analysis kits for carrying out the method of the invention.

Please replace the paragraph at page 44, line 31 - page 45, line 1 of the English specification with a new paragraph as follows:

The cell equivalents are based on a cell standard. This cell standard is produced by mRNA being extracted from a known number of cells (e.g. $2 \times$ ~~10^{-6}~~ 10^6) of a cell suspension of a carcinoma cell line which expresses the respective parameter (cell line BT474 for MNSOD, GPX1 and TXNRD1) in the manner described above, and transcribed into cDNA. This cDNA is included in each quantitative analysis in the form of serial dilutions (e.g. 6 dilution levels) and serves as reference system.

Please replace the paragraph at page 53, line 17 - page 54 line 2 of the English specification with a new paragraph as follows:

The occurrence of DNA aberrations, i.e. genomic imbalances (G.I.) (cf. Giesing M, et al. Int J Biol Markers, ~~15-94~~ 94-99, 2000) in the isolated cells also correlates clearly with elevated expression of the MNSOD, TXNRD1 and GPX1 genes, as proved by the results shown in tables 8a-d. The number of genomic imbalances correlates with the number of overexpressed genes selected from MNSOD, TXNRD1 and GPX1.

Please replace the paragraph at page 57, lines 10-16 of the English specification with a new paragraph as follows:

Fig. 1 ~~Figure 1~~ shows a CCD contact exposure image of the fluorescence radiation emitted from the array after hybridization with cDNA single-stranded fragments which were generated in the manner described above by means of mRNA total amplification from the tumor cell fraction C and the comparative cell fraction A'.